

Diabetes Basics



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Staying Healthy With Diabetes

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This booklet is designed to give you basic information about diabetes. It is not meant to take the place of diabetes self management education or meeting with your health care team.

Ask your local health department or health care provider about diabetes education resources and an appointment with a diabetes educator and a dietitian.

<https://prd.chfs.ky.gov/KYDiabetesResources/>

Recommendations are based on 2018 Clinical Practice Recommendations from the American Diabetes Association and the Art and Science of Diabetes Self-Management Education Desk Reference, 4th Edition from the American Association of Diabetes Educators.

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What Is Diabetes?

Diabetes is a lifelong medical condition that keeps your body from processing food normally.

Type 1 diabetes: your body no longer makes insulin.

Type 2 diabetes: your body may still make insulin but it doesn't work effectively.

In both cases, sugar builds up in the blood and this is diabetes.

These are five things you can do to stay healthy with diabetes:



1. Eat healthy

2. Be active



3. Take your medication as prescribed

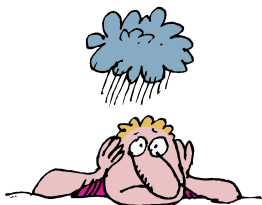
4. Monitor your blood sugar



5. Diabetes self-management education and support (DSMES)



You are Not Alone . . .



Learning you have diabetes can be overwhelming and scary. The good news is diabetes self-management education and support (DSMES) services can help you learn how to manage your diabetes as part of your daily life. Ask your health care provider about DSMES and other services offered for people with diabetes.

For more information about services in your area, visit the Kentucky Diabetes Resource Directory at:
<https://prd.chfs.ky.gov/KYDiabetesResources/>



Why Manage My Blood Sugar?

High blood sugar over time can lead to problems such as:

- Heart Attack
- Stroke
- Circulation Problems
- Nerve Damage
- Amputations
- Eye Disease
- Kidney Disease
- Sexual Problems
- Dental Problems

Managing your blood sugar, blood pressure and cholesterol can decrease your chances of developing these problems.

Recommended care for diabetes includes:

Every day:

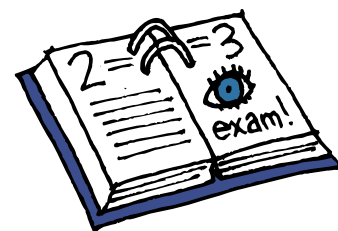
- Follow your diabetes meal plan
- Be active
- Take your medication as prescribed
- Check your blood sugar
- Check your feet
- Brush and floss your teeth
- Find positive ways to cope with stress
- Do not use tobacco products. If you use them, quit!

At every medical office visit:

- Have your bare feet checked
- Get blood pressure & weight checked
- Bring blood sugar records and discuss results with your healthcare provider

At least every six months:

- Get an A1C test
- See your dentist



Every year:

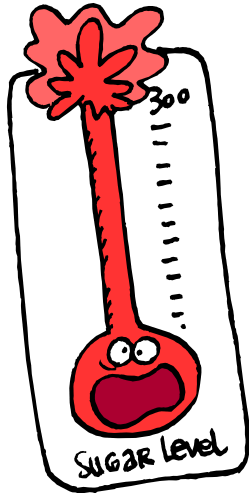
- Have cholesterol and blood fats checked
- Have dilated eye exam
- Have kidneys checked
- Have a complete foot exam
- See a dentist
- Get a Flu shot
- Ask if you need pneumonia shots or a Hepatitis B shots



Taking care of yourself makes a difference!

Hyperglycemia

High Blood Sugar



Causes

- Too much food
- Too little medication
- Sickness, infection
- Stress
- Less physical activity than usual

You may or may not have any of these symptoms:



Thirsty



Blurry Vision



Frequent Urination



Tired

Hungry
Headache
Nausea
Slow-healing Wounds
Weight Loss (mainly Type 1)

Treatment

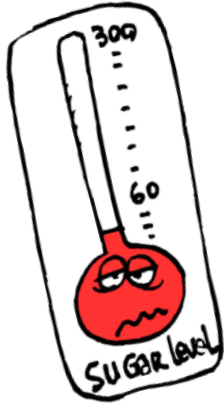
- If the cause can be found correct it.
- Drink plenty of sugar-free liquids; water is the best choice.
- Check blood sugar more often.
- If on insulin and sugar is high, you may need to check urine for ketones.
- Discuss with your health care provider at what high blood sugar level you should be concerned.
- Make a plan with your health care provider about what to do, and when to call him/her if your blood sugar is high.



Hypoglycemia

Low Blood Sugar

(70 mg/dl or below, unless different values are set with your health care provider.)



Causes

- Too little food
- Too much medication
- More physical activity than usual

You may feel any of these symptoms:

Tired
Weak
Irritable
Confused
Numbness
Headache



Dizzy



Anxious



Sweaty



Shaky

Sometimes a person may not feel any symptoms

Treatment

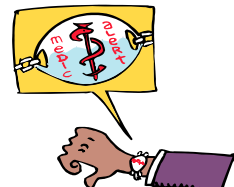
- Test your blood sugar right away if you can.
- If you can't test, treat as if you are low.
- If blood sugar is low, follow the Rule of 15:

Rule of 15:

1. **Eat 15 to 20 grams** of carbohydrate such as 4 glucose tablets, 15 grams glucose gel, 1/2 cup juice or regular soft drink, 1 cup milk, or 1 tablespoon honey or sugar.
2. **Wait 15 minutes.**
3. **Check** blood sugar again.
4. If still low, repeat Rule of 15.
5. Follow with a meal. If it's not time for next meal, eat a snack.



**Always wear
diabetes identification**



Healthy Eating

Eating right with diabetes doesn't mean you have to give up your favorite foods. Learning how to eat healthy is a key part of good diabetes care.

- Choose from a variety of healthy foods.
- Learn how different foods and the amount eaten affect your blood sugar.
- Eat meals throughout the day at regular times.
- Keep carbohydrate portions about the same at each meal.
- Snacks may be needed depending on blood sugar goals and treatment.

Carbohydrates are starches and sugars in food. They have more effect on blood sugar than protein or fat. Foods such as bread, pasta, potatoes, milk, fruit, and sweets are examples of foods high in carbohydrate. You can eat these foods but you may need to eat less at one time. Your blood sugar may go too high when you eat more carbohydrates than your body needs.

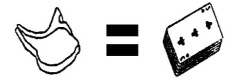


Make an appointment with a dietitian to plan your meal and daily carbohydrate needs. Ask your health care provider or look in the Diabetes Resource Directory to find a dietitian near you.

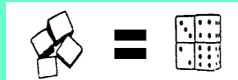
Tips for Healthy Eating

- Bake, broil or grill foods rather than fry them.
- Limit foods loaded with sugar such as regular soft drinks or desserts.
- Non-starchy vegetables such as carrots, celery, and broccoli are high in fiber, but low in calories and make great snacks!
- Read food labels to know what you are eating.

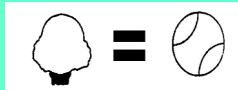
What does a serving look



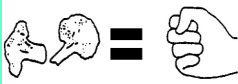
3 ounces of meat is about the size and thickness of a deck of playing cards



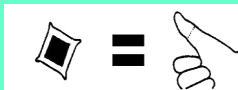
1 oz of cheese is about the size of 4 stacked dice



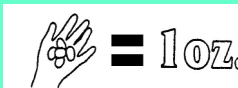
1/2 cup of ice cream is about the size of a tennis ball



1 cup of veggies is about the size of your fist

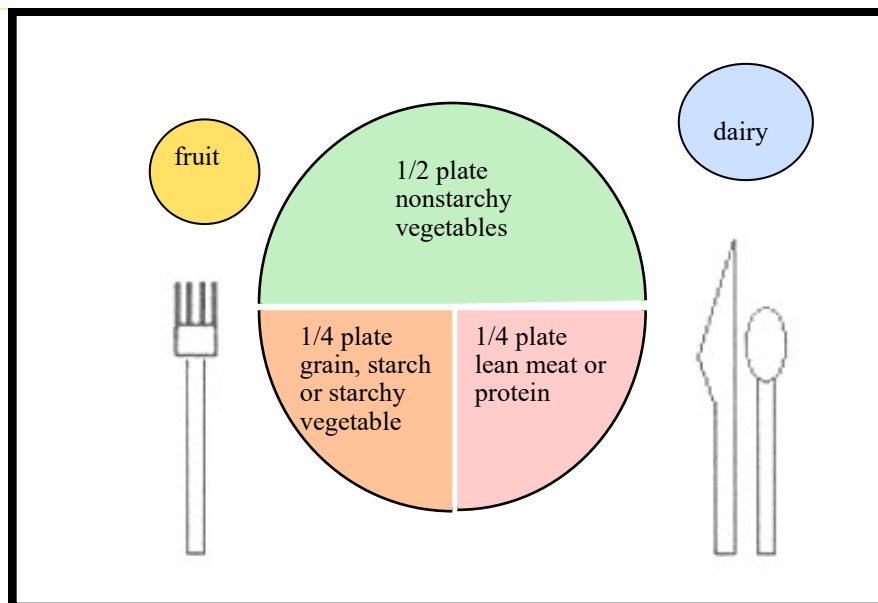


1 teaspoon of butter or peanut butter is about the size of the tip of your thumb



1 ounce of nuts or small candies equals one handful

Healthy Plate



A healthy meal plate includes a variety of foods:

- Fill 1/2 the plate with **nonstarchy vegetables** including a variety of colors such as dark green, red and orange.
- **Fruit** serving sizes will vary. Choose whole fruits and fruit canned in its own juice with no added sugar.
- **Grains or starchy vegetables** fill 1/4 of the plate. Include whole grains for half of your grain choices. Starchy vegetables include legumes (beans and peas), potatoes and squash.
- Choose fat-free or low-fat **dairy** foods including milk, yogurt, cheese and/or fortified soy beverages.
- A variety of **protein** foods fill 1/4 of the plate and include seafood, lean meats and poultry, eggs, legumes (beans and peas), nuts and seeds and soy products.

Sugar and Sugar Substitutes

With planning, sugar can be a part of a meal plan for people with diabetes. Talk with your diabetes educator or Registered Dietitian for more information. Sugar substitutes can add sweetness with fewer or no calories.



Reading Labels

The “Nutrition Facts Label” is the best source of nutrition information. It shows the:

- Serving size and servings per container.
- Total calories per serving.
- Total fat grams per serving including saturated, unsaturated, and trans fats.
- Cholesterol per serving.
- Sodium (salt) per serving.
- Total carbohydrates per serving including sugars and dietary fiber per serving. “Added sugars” is required on labels. Limit added sugar to less than 10% of total daily calories.
- Total grams of protein per serving.
- Vitamins and Minerals required to be listed include: Vitamin D, Calcium, Iron and Potassium.
- Daily Value percentages on the right side of the label represent values for a 2000 calorie diet.

Nutrition Facts	
2 servings per container	
Serving size 1 1/2 cup (208g)	
Amount per serving	
Calories	240
% Daily Value*	
Total Fat 4g	5%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Cholesterol 5mg	2%
Sodium 430mg	19%
Total Carbohydrate 46g	17%
Dietary Fiber 7g	25%
Total Sugars 4g	
Includes 2g Added Sugars	4%
Protein 11g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 6mg	35%
Potassium 240mg	6%
<small>* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	



Additional Tips:

- Servings sizes on the nutrition facts label may not be the exact serving size for your meal plan.
- If you are eating more than one serving, multiply the nutrition facts by the number of servings you eat.
- A rule of thumb for sodium (salt) is 400mg or less per single serving and 800mg or less for a meal.
- Ingredients are listed in order of the amount they are found in the food.

Being Active

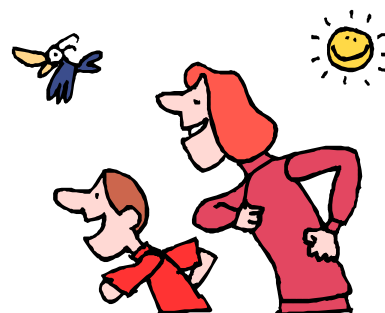
Regular physical activity is a key part of your diabetes care. For most people with type 2 diabetes, being active helps you reach your blood sugar goal.

Being active may also:

- Reduce stress and increase energy
- Increase strength and range of motion
- Help control blood pressure and cholesterol
- Help insulin work better

Tips for a Successful Activity Plan

- Choose an activity you enjoy
- Make time for being physically active
- Find a buddy
- If you haven't done physical activity in a while, begin slowly
- Aim for at least 30 minutes a day



Safety Tips:

Things to carry with you:

1. Phone numbers of family and health care providers in case of an emergency
2. Cell phone
3. Blood sugar meter
4. Diabetes identification
5. Emergency food to treat low blood sugar, such as glucose tablets



Talk with your health care provider about what activities might be best for you.

- Drink plenty of sugar-free fluids, like water.
- If on medicine that can make your blood sugar go too low, check your blood sugar before and after your activity.
- People with diabetes are at higher risk for low blood sugar during and for 12-24 hours after physical activity.
- Wear good fitting shoes while exercising.
- Check your feet before and after exercise.
- Include a warm-up and cool-down each time you do physical activity.
- Don't exercise in extreme hot or cold weather.
- Don't exercise if you have ketones.



Medications

- Most people with diabetes need to take medicine to reach their blood sugar goal.
- Medications work better when you follow a healthy eating and physical activity plan.
- Medications may be pills taken by mouth or medications that must be injected.
- Keep a current list of ALL your medications with you including your over-the-counter medicines.



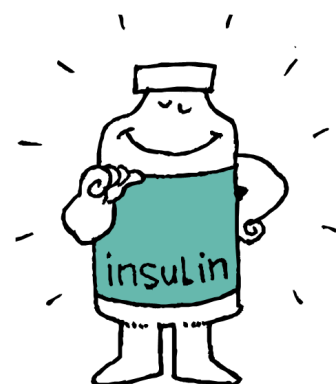
Tips for Taking Medicines

- Know the name of your medication, the amount to take, and the time to take it.
- Carry a list of your medications with you at all times.
- Learn how your medication works and its possible side effects.
- Call your health care provider if you have any side effects.
- Do NOT stop taking your medication or change the amount without asking your health care provider.
- Talk to your pharmacist about your medication.



Insulin

- If you have type 1 diabetes, your body no longer makes insulin and you must take insulin to live.
- If you have type 2 diabetes, you may need insulin to help you reach your blood sugar goal.
- When you start on insulin you should be taught how to use it correctly. Talk with your health care provider or pharmacist about who should teach you to give your injectable medicines.



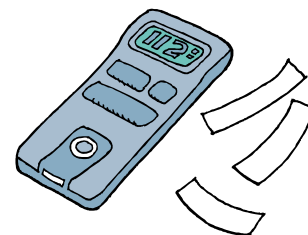
Tips for Taking Insulin



- People who take insulin may use a syringe, pen, pump or pod to give their insulin.
- Store insulin according to directions on the package or talk with a pharmacist.
- Check the expiration date on the bottle of insulin or insulin pen.
- Do NOT use the insulin if there are solids or frosting in the bottle.
- Keep the bottle or pen of insulin you are using at room temperature.
- Do NOT store insulin in temperatures that are too hot or too cold. Keep out of sunlight.
- Be careful to draw or dial up the correct amount of insulin.
- Dispose of your needles properly. Check with health care provider, diabetes educator, and/or trash company about proper disposal of these items.

Monitoring Your Blood Sugar

Blood sugar testing (self-monitoring) is an important part of helping you take care of your diabetes. It helps you know if you are meeting your blood sugar targets and if your blood sugar is high or low. Self-monitoring helps you understand how your food, physical activity, medicine and other things like illness or stress affect your blood sugar.



- Find out which blood sugar meter your insurance will pay for, and ask your health care provider to give you a prescription for that meter.
- Follow the instructions that come with your meter. If you have questions look at the instruction book or call the “800 number” found on your meter.
- Many people check their blood sugar several times a day. Talk with your healthcare provider about how often and when you should check.
- Common times that people choose to check their blood sugar are:
 - ⇒ Before a meal and then two hours after the meal
 - ⇒ Before and after doing physical activity
 - ⇒ Anytime you feel your blood sugar is low or high or you feel different than usual.
- Dispose of your lancet properly. Check with your healthcare provider, diabetes educator, and/or trash company about safe disposal.
- Write your blood sugars in your record book. Bring your meter and record book to each medical visit.
- Take your meter with you wherever you go so you can see how things such as eating, physical activity, and stress affect your blood sugar.



A1C Test

What should my blood sugar numbers be?

Blood Sugar before meals	Blood Sugar 1-2 hours after starting to eat meal
80-130 mg/dl	less than 180 mg/dl

Another test for blood sugar control is the A1C. This is done by your health care provider. This test tells what your average blood sugar levels have been for the past 2 to 3 months. For most, it is best to keep your A1C less than 7%. Talk to your healthcare provider about if a higher or lower goal may be better for you.

Sick Days

When you are sick, your blood sugar may go higher or lower than usual. **It is important to make a plan for what you will do when you are sick.** Discuss this sick day plan with your health care provider.



Call your health care provider if you:

- Have blood sugars that stay over 300 mg/dl or under 70 mg/dl.
- Have moderate or large ketones in urine.
- Vomit more than once.
- Have diarrhea more than 5 times or for longer than 6 hours.
- Can't eat solid foods for more than 24 hours.
- Can't keep liquids down.

Sick Day Tips

- Never stop taking your diabetes medication without talking to your health care provider.
- Check your blood sugar every 2 – 4 hours when you are sick.
- Drink 8 ounces of fluid per hour. Whether the fluid should have carbohydrate or not, depends on your blood sugar level.
- Every 3 hours, the drink should be a liquid with sodium, like bouillon.
- Test ketones every 4 hours or until negative (mostly type 1)
- Talk with your pharmacist or health care provider about what over-the-counter medicines are best to use when you are sick.

Sick Day Foods

Try to eat regular meals. If you can't, eat foods or drink liquids that keep your carbohydrate intake about the same:

- 1/2 cup applesauce
- 4-6 crackers
- 1/2 cup regular gelatin
- 1/2 cup juice
- 1/2 cup pudding



Resources

- **Academy of Nutrition & Dietetics**
www.eatright.org
- **American Association of Diabetes Educators**
www.diabeteseducator.org
- **American Diabetes Association**
www.diabetes.org
- **Kentucky Diabetes Prevention and Control Program**
<http://www.chfs.ky.gov/diabetes>
- **Centers for Disease Control and Prevention**
www.cdc.gov/diabetes
- **Kentucky Diabetes Network, Inc.**
www.kydiabetes.net
- **Kentucky Diabetes Resource Directory**
<https://prd.chfs.ky.gov/KyDiabetesResources>
- **National Diabetes Education Program**
www.ndep.nih.gov



Contact Information

Write the names and phone numbers for your diabetes care team :

Health Care

Provider: _____ **Phone:** _____

Diabetes Educator: _____ **Phone:** _____

Dietitian: _____ **Phone:** _____

Pharmacy: _____ **Phone:** _____

Other: _____ **Phone:** _____

